Users Guide

HITACHI

C28WF727N
C32WF727N

100Hz NATURAL SCAN

PROGRESSIVE SCAN

WIDE SCREEN

HITACHI

Dear HITACHI customer

Congratulations on your purchase of the very latest state of the art technology. At Hitachi we pride ourselves on producing high quality televisions with outstanding picture and audio capabilities, coupled with Hitachi's reputation for superior reliability. You should enjoy many years of trouble free operation from your TV. Take some time to read this Users Guide thoroughly, and if you encounter any difficulty, firstly refer to the Trouble Shooting Guide at the rear of this manual.
In the unlikely event of a problem occurring with your TV, contact your dealer immediately.

Software Notice

It is prohibited for the end user of this product to copy, reverse engineer or reverse compile the software included therein, save to the extent permitted by law.

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This television has been designed and manufactured to meet international safety standards, but like any electrical equipment, care must be taken if you are to obtain the best results and safety is to be assured.

DO read the operating instructions before you attempt to use the equipment.

DO ensure that all connections, (including the mains plug, extension leads and inter-connections between the pieces of equipment), are properly made and in accordance with the manufacturers instructions. Switch off and withdraw the mains plug before making or changing connections.

DO consult your dealer if you are in any doubt about installation, operation or safety of your equipment.

DO be careful with any glass panels or doors on equipment.

DO place your TV on a flat surface, or if supplied, the stand accessory.

DO observe the manufacturers instructions when connecting extension leads to your TV. The fuse should be a 5 Amp fuse with the safety symbols ASTA and BSI displayed. If you are in any doubt about the extension installation, please consult a competent electrician.

Should you require to replace the fuse in the moulded plug with a new fuse, then please replace with one of the same value, type and approval as the original. Ensure the fuse cover is returned to its original position.

IF you intend placing this TV into a cabinet or a wall alcove, please ensure there is at least a 100mm (10cm) gap to the sides, rear and top of the TV. This is to allow for adequate ventilation during your TV's operation.

To prevent scratching or damaging the tube face, do not knock or rub the surface with sharp or hard objects. Clean the screen with a soft cloth moistened with warm water and dry with a soft cloth. A mild soap may be used if the screen is extremely dirty. Do not use harsh or abrasive cleaners!

DO NOT remove any fixed cover as this may expose dangerous voltages.

DO NOT cut off the fitted mains plug as it may contain a special radio interference filter, the removal of which could lead to impaired performance. If you wish to extend the lead, obtain an appropriate extension lead or consult your dealer.

DO NOT continue to operate the equipment if you are in any doubt about it working normally or if it is damaged in any way - switch off, withdraw the mains plug and consult your dealer.

DO NOT leave equipment switched on when it is unattended unless it is specifically stated that it is designed for unattended operation or has a stand-by mode. Switch off using the switch on the equipment and show your family how to do this. Make special arrangements for infirm or handicapped people.

DO NOT obstruct the ventilation of the equipment, for example with curtains or soft furnishings. Overheating will cause damage and shorten the lifespan of your equipment.

DO NOT use makeshift stands and NEVER fix legs with wood screws - to ensure complete safety, always fit the manufacturers approved stand or legs with the fixings provided according to the instructions.

DO NOT place objects filled with liquids, e.g. a vase, on, or close to the equipment, to avoid spillages into the inside of the apparatus.

DO NOT allow electrical equipment to be exposed to rain or moisture.

DO NOT place hot objects such as candles or nightlights on, or close to, equipment. High temperatures can melt plastic and lead to fires.

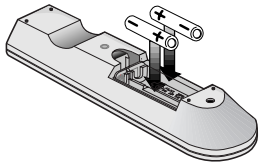
DO NOT listen to headphones at high volume, as such use can permanently damage your hearing.

DO NOT use equipment such as personal stereos or radios so that you are distracted from the requirements of traffic safety. It is illegal to watch television whilst driving.

NEVER let anyone, especially children, push anything into holes, slots, or any other opening in the case - this could result in a fatal electrical shock.

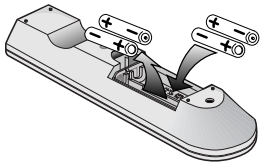
NEVER guess or take chances with electrical equipment of any kind - it is better to be safe than sorry!

always



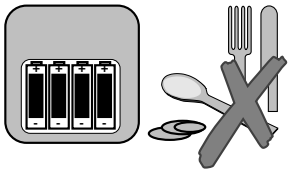
Take care to fit your batteries correctly, observing the plus '+' and minus '-' marks on the battery and appliance. Incorrect fitting can cause leakage, or in extreme cases, fire or explosion.

always



Replace the whole set of batteries at one time, taking care not to mix old and new batteries of different types, since this can result in leakage, or in extreme cases, fire or explosion.

always

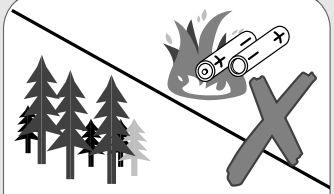


Store unused batteries in their packaging and away from metal objects which may cause a short circuit resulting in leakage, or in extreme cases, fire or explosion.

always

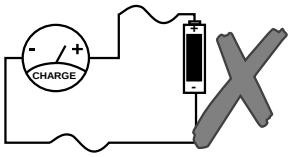
Remove dead batteries from equipment, and all batteries from equipment that is to be left for long periods of time without any use. Otherwise the batteries may leak and cause damage.

never!



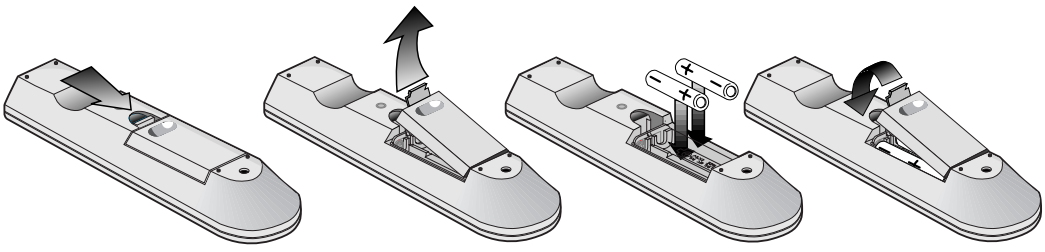
Never dispose of batteries in fire as this can cause an explosion.
Respect the environment - always dispose of batteries in an environmentally friendly manner.

never!



Never attempt to recharge ordinary batteries, either in a charger or by applying heat to them. They may leak, cause fire or even explode.
Rechargeable NiCAD batteries and chargers can be purchased from any good High Street electrical retailer.

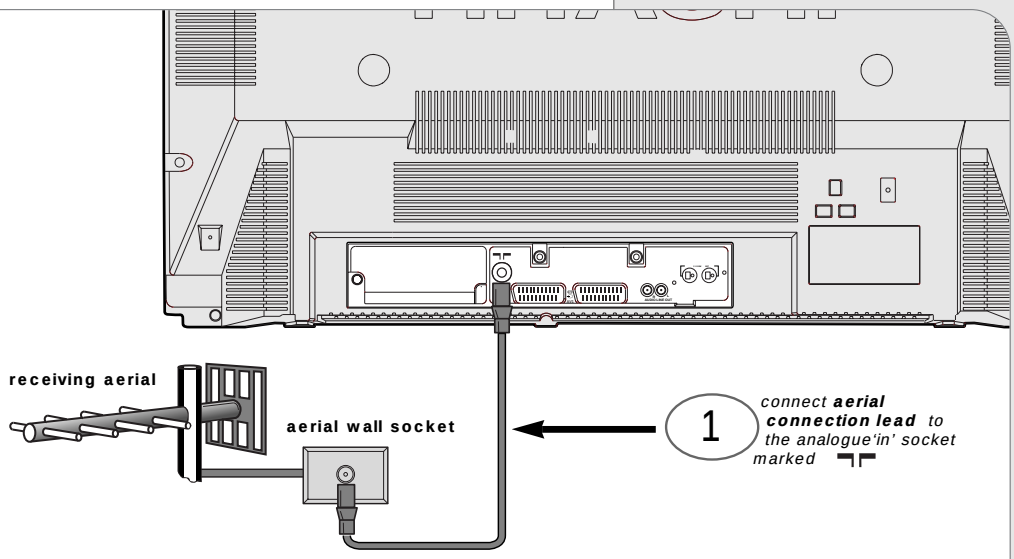
battery installation



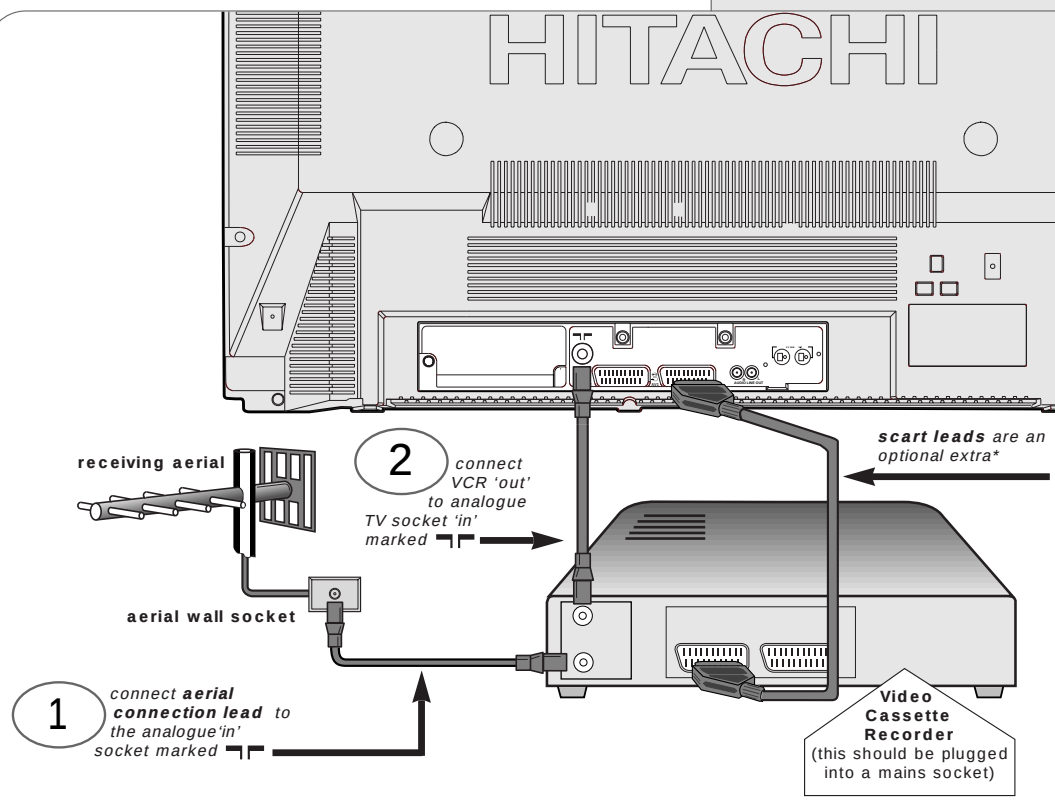
1. Remove cover of handset by lifting up the cover at the recess.
2. Insert batteries into handset as shown and replace cover.

1. When inserting the batteries make sure the polarities are correct, that is, '+' to '+', '-' to '-'.
2. Replace the batteries with the equivalent 'AA' type.
3. Discard old batteries safely, following the battery safety guidelines.

aerial connection

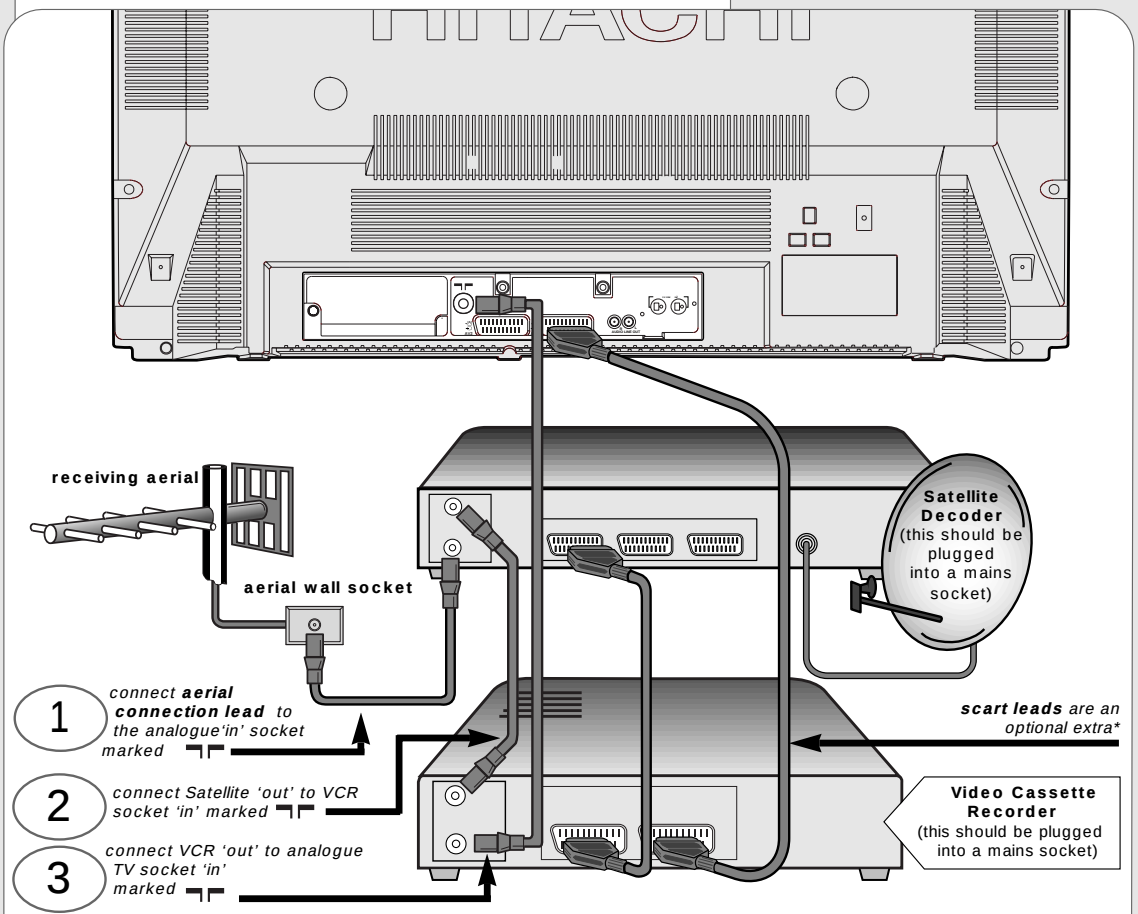


aerial and VCR connection


HITACHI
receiving aerial
2
connect VCR 'out' to analogue TV socket 'in' marked
scart leads are an optional extra*
aerial wall socket
1
connect **aerial connection lead** to the analogue'in' socket marked
Video Cassette Recorder
(this should be plugged into a mains socket)

IMPORTANT NOTE. When you connect your VCR to your television, the Audio Visual value has to be set correctly to ensure best picture quality - see **AV setup** on page 33

satellite and VCR installation

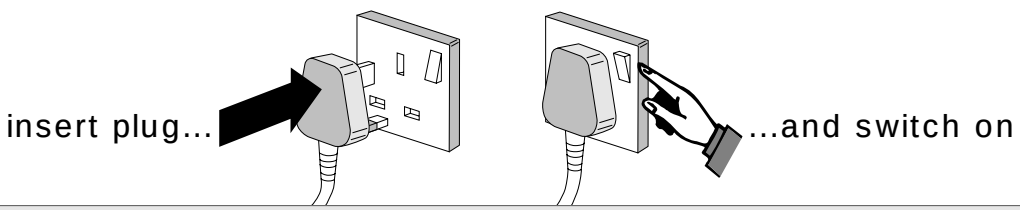

receiving aerial
aerial wall socket
Satellite Decoder (this should be plugged into a mains socket)
1
connect aerial connection lead to the analogue 'in' socket marked
2
connect Satellite 'out' to VCR socket 'in' marked
3
connect VCR 'out' to analogue TV socket 'in' marked
scart leads are an optional extra*
Video Cassette Recorder (this should be plugged into a mains socket)

*A scart lead should be fitted between your TV and VCR to enhance your picture and sound quality. Scart leads are essential if you have a stereo TV and VCR and wish to obtain stereo sound from your equipment. These leads can be purchased from your Hitachi dealer or any good High Street electrical retailer.

VHS video equipment should be connected to the AV1 scart socket located at the rear of your TV. A dedicated program number may be assigned to AV1, allowing you easier access to view external equipment broadcasts. How to assign an AV signal to dedicated program numbers is explained in **Signal Source Entry** on page 30.

connecting to the mains socket

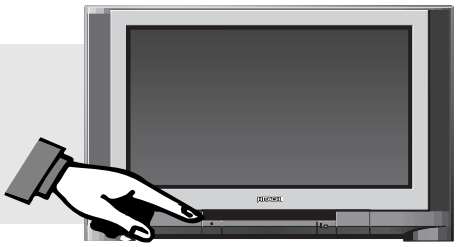
Important - If you have not already done so, please read **television safety** on page 4 before connecting your television and external equipment.



important note on VCR and satellite

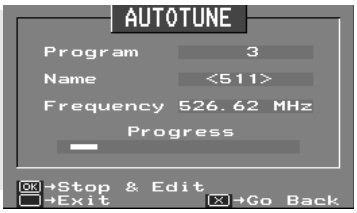
Do not switch your TV on until all external equipment is connected. If you have a Video Cassette Recorder or a Satellite receiver connected to this TV please ensure that they are switched on before automatic tuning begins. In the case of a VCR, insert a pre-recorded tape and begin playback of your equipment. With a Satellite receiver select Sky News. These measures ensure that all your external equipment is tuned in during the autotune procedure.

1 To make your program tuning easier, HITACHI have installed an automatic tuning procedure to find the programs. Switch your TV on.

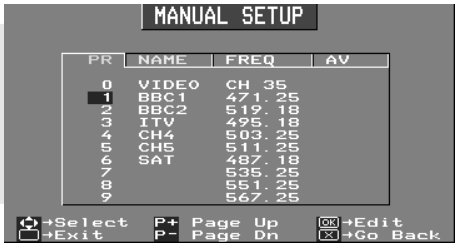


2 If you are satisfied all external equipment has been connected, press the OK button on your handset and AUTOTUNE will begin. OK II

3 Your TV will now search through the frequencies, listing them in into the following order - 1.BBC1, 2.BBC2, 3.ITV 4.CH4/S4C, 5.CH5 (subject to availability) 6.Satellite.



4 By using the up and down buttons you can view all the programs found and stored during AUTOTUNE.



5 To finish the installation process and return to normal TV operation press the menu button on your handset twice.

VCR should be tuned into Program 0.

...notes on manual tuning

As well as an automatic tuning procedure your HITACHI television also allows you to input broadcast frequencies through a number of different entry methods. Follow the below steps and choose one of the 5 entry methods to input broadcast frequencies.

1. Press and hold the MENU button for 5 seconds. The INSTALL option in the MAIN MENU appears.

2. Press the cursor down button to select INSTALL.

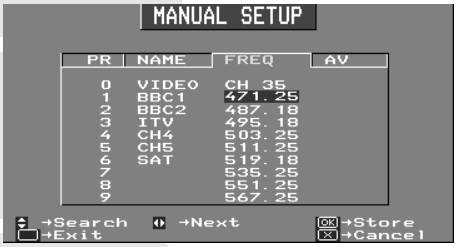
3. Once highlighted, accept selection.

4. Press the cursor down button to select MANUAL SETUP.

5. Once highlighted, accept selection

6. Use the cursor keys to move the selection bar over the program FREQUENCY required to be adjusted.

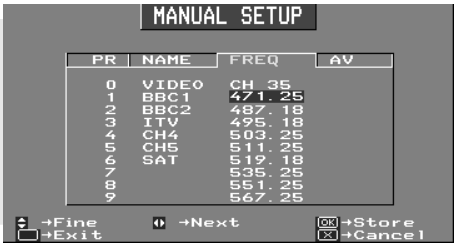
7. Once highlighted, accept the selection to change the frequency and you will see the selection bar turn red - it is ready to be changed.



8. Select your choice of FREQUENCY entry method using the left/right cursor keys.

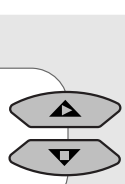
entry method 1

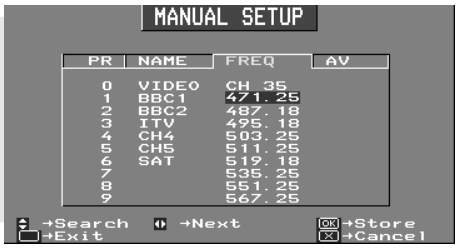
The first option will be to fine tune the chosen frequency either up or down.



entry method 2

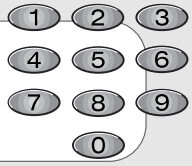
If the right cursor key is pressed, autosearch becomes an option - you can search either up or down.





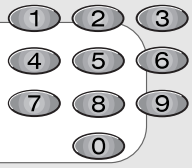
entry method 3

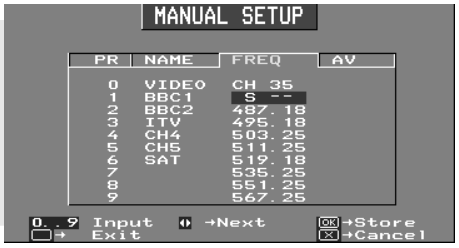
If the right cursor key is pressed again, you can enter a two digit channel number (CH) using the buttons 0-9.



entry method 4

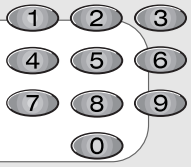
If the right cursor key is pressed again, you can enter a two digit S-Band number using the buttons 0-9.

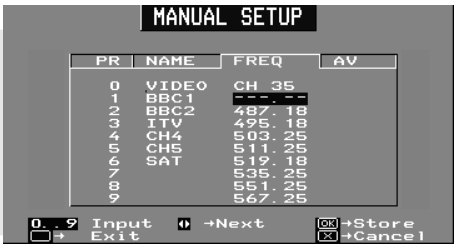




entry method 5

If the right cursor key is pressed again, you can manually input a five digit frequency using the numbered handset buttons 0-9.

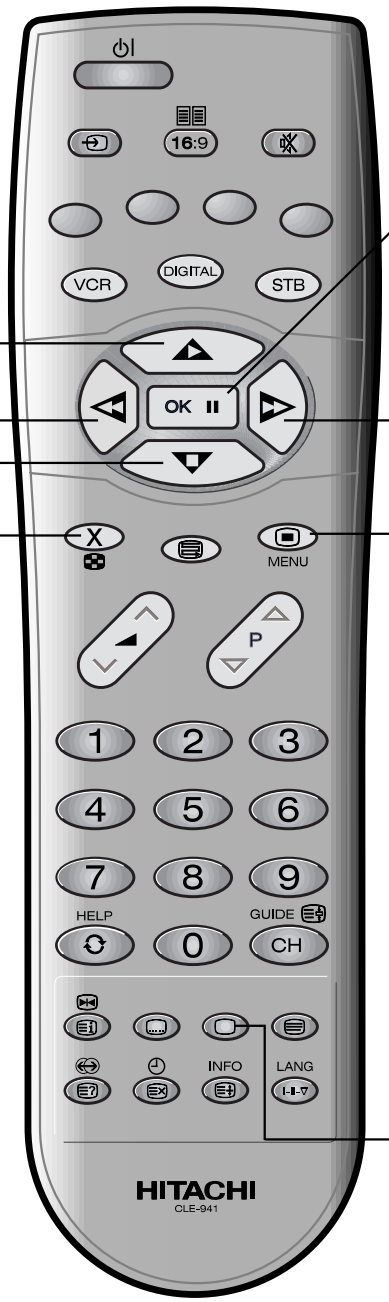




9 Once the method of entry has been decided upon and the new frequency or channel entered, this can then be stored in the TV's memory by pressing the confirmation button.

10 To return to normal TV operation press the television button on your handset.

The handset controls shown below are used when programming your TV and to adjust the sound and picture features.



cursor up

Use this button to move the menu selection box up.

accept

This button is used to confirm a highlighted selection.

cursor left

Use this button to move the menu selection box left.

cursor right

Use this button to move the menu selection box right.

cursor down

Use this button to move the menu selection box down.

menu

This button is used to enter the main menu. This is where your TV's features options are displayed.

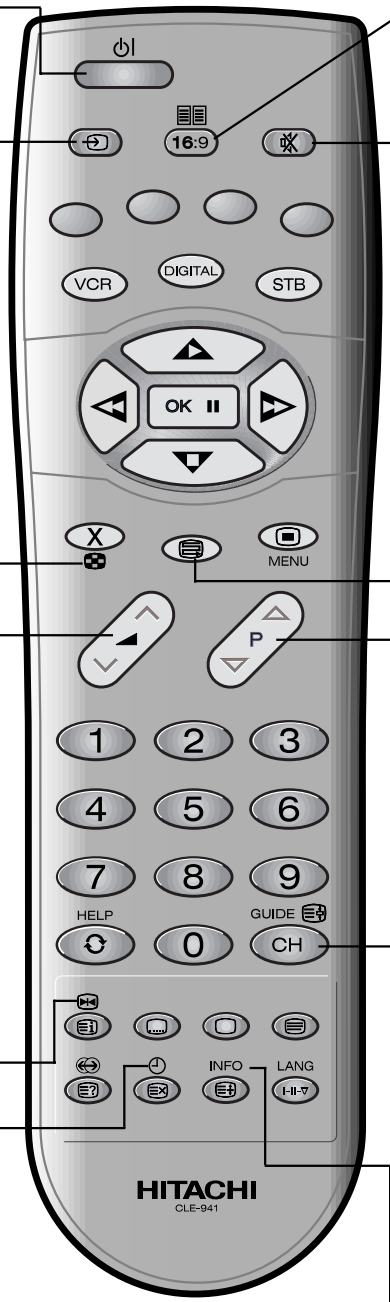
go back

This button is used to return to the previous screen you were viewing, or to cancel a selection.

exit

Press this button to leave the menu you are on and return to normal TV operation.

The handset controls shown here are used when your TV is in normal operation.



standby

Used to switch your TV in and out of standby mode (see page 32 for details).

AV setup

Used to select a signal source for external equipment *(see pages 30, 31 and 33)*

multi-picture

Used to display all received broadcasts on screen *(see television features, multi-picture, page 27)*

volume controls

Used to increase '+' or decrease '-' your TV's volume.

freeze frame

This button allows you to 'freeze' the picture being viewed on your television.

time

Use this button to display the current time on screen.

16:9 button

This button allows you to switch between the various wide screen features of your TV (see page 22).

sound mute

This button allows you to switch the TV's sound on and off.

Progressive Scan

Use this button to change the scanning mode of your TV - from 100Hz to Progressive scan (see page 26).

programme controls

Used to change channels either up '+' or down '-'

CH frequency

This allows you to directly input known broadcasting CH or frequency numbers.

INFO info

Press this button to view the current TV status.

The handset controls shown here are used when you are operating Teletext.

dual page

When in Teletext mode, press once to display dual page mode, press again to view current page and TV picture (see page 25 for details)

swap

In Teletext mode views the previous magazine page entered. (in TV mode returns from your current viewing channel to the previous one).

index

Pressing this button will take you to the index.

reveal

Used in Teletext mode to show hidden information eg. quiz pages answers.

update

Restores TV picture whilst the TV is looking for the entered Teletext page.

colours

(red, green, yellow, blue)
On certain pages in teletext, these will have coded instructions i.e. a shortcut to a teletext page or title.

hold

Use this to 'freeze' the teletext page on display to prevent the page changing (press again to continue).

television

Press this button to return to normal TV operations when in the teletext mode.

teletext

Press this button to use the Teletext services.

expand

Use this button to expand the size of the teletext page on view.

subtitles

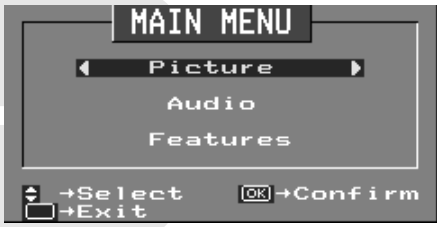
Use this to access a subtitle service directly rather than through a teletext service (subject to subtitle service broadcasting).

P100 CEEFAX 2 100 Wed 19 Mar 15:49/06
BBC CEEFAX
CEEFAX AT-A-GLANCE PRESS HOLD
NEWS HEADLINES 101 LOTTERY 555
NEWS INDEX 102 BACKBEAT 560
ELECTION 97 120 FREETIME 570
NEWS EXTRA 140 GARDENING 573
CITY 88C2 200 COOKBOOK 580
SPORT 300 ON THE BOX 590
WEATHER 400 TV GUIDE 600
TRAVEL 430 TV LINKS 615
CBBC INDEX 500 RADIO BBC1 640
SUB ZERO 501 EDUCATION BBC2 630
NEWSROUND 510 READ HEAR BBC2 640
SHOWTIME 520 COMMUNITY BBC2 650
SWITCHED ON 540 RACING 660
>>>>>
NEWS EXTRA NEWS EXTRA NEWS EXTRA

Teletext features start on page 24

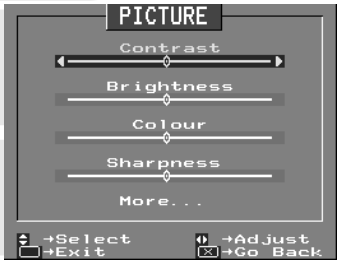
For picture and sound values, moving the cursor ***left will decrease*** values, whilst moving the cursor ***right will increase*** values.

1. Press the MENU button to obtain MAIN MENU.



2. The MAIN MENU highlights the PICTURE option automatically - press OK to select.

3. Select the picture control to be adjusted by using the up / down cursor buttons.

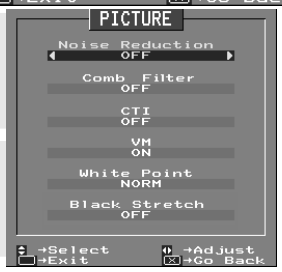


4. Once highlighted, adjust the chosen controls by pressing the right / left cursor buttons.

5. To select MORE options use the up/down buttons to highlight selection and then press OK to confirm.

6. Select the picture control to be adjusted by using the up/down cursor buttons.

7. Once highlighted, adjust the chosen controls by pressing the right/left cursor buttons (for explanation see below)



8. The values changed will remain until they are next altered. Press the TV button on your handset to return to normal TV operation.

Noise Reduction

Helps reduce the noise interference visible on your television, especially in weaker signal reception areas.
AUTO is recommended for normal viewing as this automatically compensates for the amount of noise in the picture.

Comb Filter

This control lets you remove 'swirling' cross colour when your picture contains close or small check patterns.

CTI

Colour Transient Improvement - This control lets you improve the clarity of your televisions colour edges.

VM

Velocity Modulator - this increases or decreases the sharpness of your televisions picture so it appears less blurred especially in left and right edges of the screen.

White Point

NORMAL - gives an equally balanced spectrum of colour.
COOL - exaggerates the blue tones of your television picture.
WARM - this exaggerates the red tones of your television picture.

Black Stretch

This control turns all dark grey pixels black.

1 Press and hold the MENU button for 5 seconds. The INSTALL option in the MAIN MENU appears.

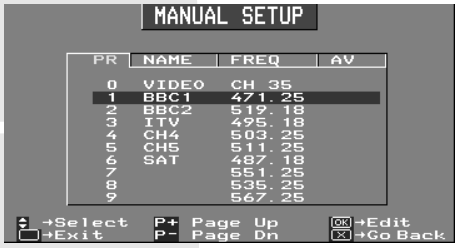
2 Press the cursor down button to select INSTALL.

3 Once highlighted, accept selection.

4 Press the cursor down button to select MANUAL SETUP.

5 Once highlighted, accept selection.

6 Select your program to swap by moving the selection bar using the up/down cursor buttons over a channels PR number, highlighted in blue.

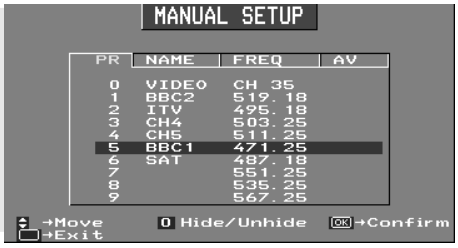


7 Once highlighted, accept the selection and you will see the selection bar turn red - it is ready to be swapped.

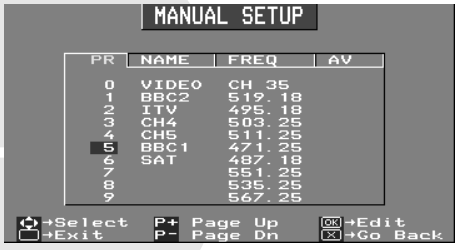
When a channel has been selected, you also have the option to 'hide' a program - this makes your TV skip the hidden channel when the program controls are used to change channels. Press the '0' digit on your handset and you will see the text within your chosen selection turn red. Your selection is hidden. Pressing the '0' button again to 'unhide' the selection. If a hidden channel is to be viewed, this can be achieved by entering the channel number with the handset digits 0 to 9.

8 Using the up/down buttons again you can move the selection to occupy a new position of your choice.

Note: Using the P+/P- buttons for movement will make selections in multiples of 10.



9 Once this has been done, accept selection and the chosen programs will now occupy its new position - repeat if necessary.



10 To return to normal TV operation press the television button on your handset.

...notes on program name change

Program name change can be very useful if you connect external equipment to your television. For example, if you have a games machine connected, you can name the allocated channel 'GAME', making it easier to find.

1. Press and hold the MENU button for 5 seconds. The INSTALL option in the MAIN MENU appears.

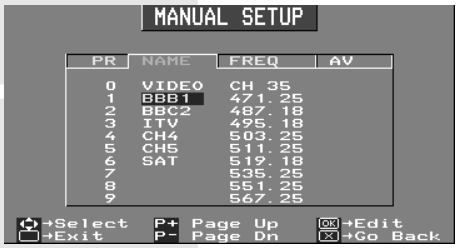
2. Press the cursor down button to select INSTALL.

3. Once highlighted, accept selection.

4. Press the cursor down button to select MANUAL SETUP.

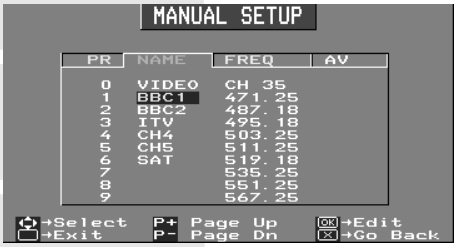
5. Once highlighted, accept selection.

6. Use the cursor keys to move the selection bar over the NAME required to be adjusted.



7. Once highlighted, accept the selection to change the name and you will see the selection bar turn red and the chosen character will flash on and off - it is ready to be changed.
Note: Pressing the '0' button will clear all the characters of the chosen name.

8. You can input up to 5 characters - to ***change*** each character use the up/down cursor buttons.



9. To ***move*** from character to character use the right/left cursor buttons.

10. Once the new NAME has been chosen and entered, confirm your entry to be stored and repeat if necessary.

11. To return to normal TV operation press the television button on your handset.

...notes on speaker setup

You may want to replace your TV's internal speaker sound to a full external amplified speaker setup using the **audio line out sockets** (see page 28). In this case the you can mute the TV's speakers by turning the Internal TV Speakers 'OFF', allowing sound only to be heard through the external amplified sound sources.

1. Press and hold the MENU button for 5 seconds. The INSTALL option in the MAIN MENU appears.

2. Press the cursor down button to select INSTALL

3. Once highlighted, accept selection.

4. Press the cursor down button to select SPEAKER SETUP.

5. Once highlighted, accept selection.

6. Use the left right buttons to make your selection.

When exiting the SPEAKER SETUP menu the selection you have chosen will remain as the setting until next adjusted.

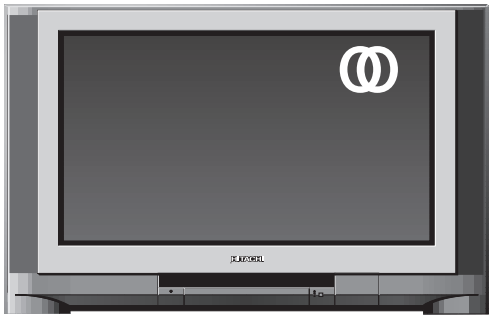
7. To return to normal TV operation press the television button on your handset.

...notes on nicam features

Nicam is a method for transmitting and receiving stereo sound. If your TV is unable to receive Nicam because of the wrong geography, climate etc., or when Nicam in not transmitted in your location it will produce a monaural sound source.

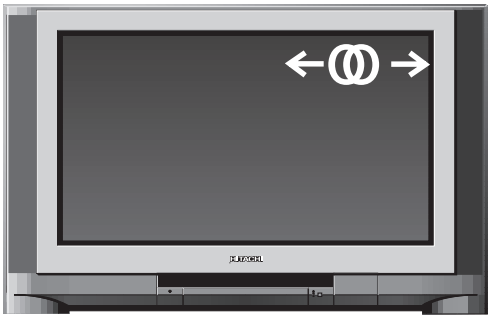
stereo

This effect produces nicam digital stereo sound from your TV. Use this mode for the majority of TV viewing. When selected the stereo symbol appears.
Use the I-II-? button on your handset to switch to stereo.



wide stereo

This effect enhances nicam digital stereo by forcing a wide area of sound from the TV. Use this mode when viewing action movies or sports events to obtain spatialising acoustic performance.
Use the ⟷ button on your handset to switch to wide stereo.



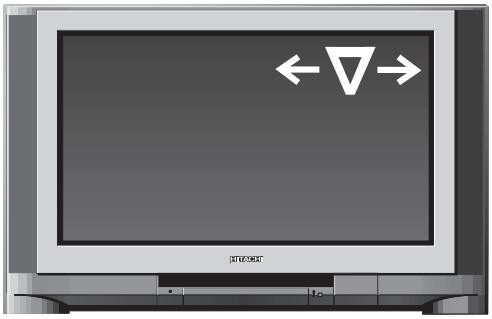
monaural

In this mode the TV produces a single sound source. The TV will automatically select this sound when a mono signal is found. Some stereo signals can be poor in adverse weather conditions, and mono should be selected to avoid poor sound.
Use the I-II-? button on your handset to switch to mono.

pseudo stereo

This creates an ambient sound from mono signals imitating that of stereo sound.
Use the ⟷ button on your handset to switch to pseudo stereo sound.

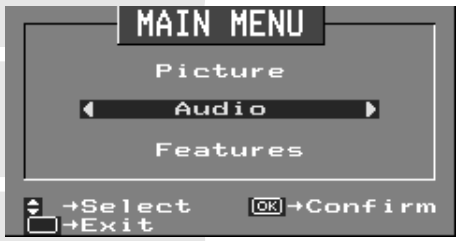
Note: Pseudo Stereo is only available in monaural transmissions.



1 Press the MENU button to obtain MAIN MENU.

2 Press the cursor down button to select AUDIO.

3 Once highlighted, accept selection.



4 Select the control to be adjusted by using the up/down cursor buttons.

5 Once highlighted, adjust the chosen controls by pressing the right/left cursor buttons.

volume control

This control is used to increase, or decrease the sound from your TV's speakers.

balance

This control is used to adjust balance of sound from left to right and vice versa.

loudness on/off control

When listening to your TV at a low volume, switch this control ON to compensate for the lack of low and high frequencies.

6 You can view the EQUALISER screen by selecting 'MORE' using the up/down cursor buttons.

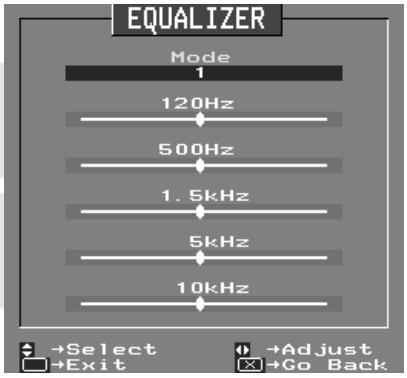
7 Once highlighted, accept selection.

equaliser

The EQUALISER menu is used to adjust the tonal ranges of your TV's sound.

8 Select the mode or sound frequency to be adjusted by using the up/down cursor buttons.

9 Once highlighted, adjust the chosen controls by pressing the right/left cursor buttons.



mode

You have a choice of 3 individual 'modes' which can be adjusted to suit personal needs. Set a complete range value (detailed below) and your TV will remember the settings in the appropriate mode number.

120Hz bass range

This range controls the bass sound from your television - if the bass sound from your TV is too 'boomy' turn this control down.

500Hz mid bass range

This range is the basis of your sound - if your televisions sound is to rich, or not rich enough, adjust this control to enhance the TV's sound.

1.5kHz mid range

Use this control to adjust the mid-range voice area of your TV's sound.

5kHz mid high range

When this control is increased it emphasises the flute and string instruments of your TV's sound - when decreased it has a soothing effect on the sound.

10kHz high range

The sharp sound of triangles and cymbals are emphasised if this control is increased.

10 To return to normal TV operation press the television button on your handset.

...notes on Sleep Timer

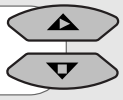
This feature is used to automatically place your TV into standby mode after a set number of minutes - use the right/left cursor buttons to set the timer between 5 and 120 minutes.
When the timer has only a minute left this will be shown on the screen as a countdown from 59 seconds to zero, after which your TV's status will be standby.

1. Press the MENU button to obtain MAIN MENU.

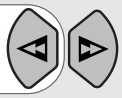
2. Press the cursor down button to select FEATURES.

3. Once highlighted, accept selection.

4. Use up/down cursor buttons to select option to adjust.



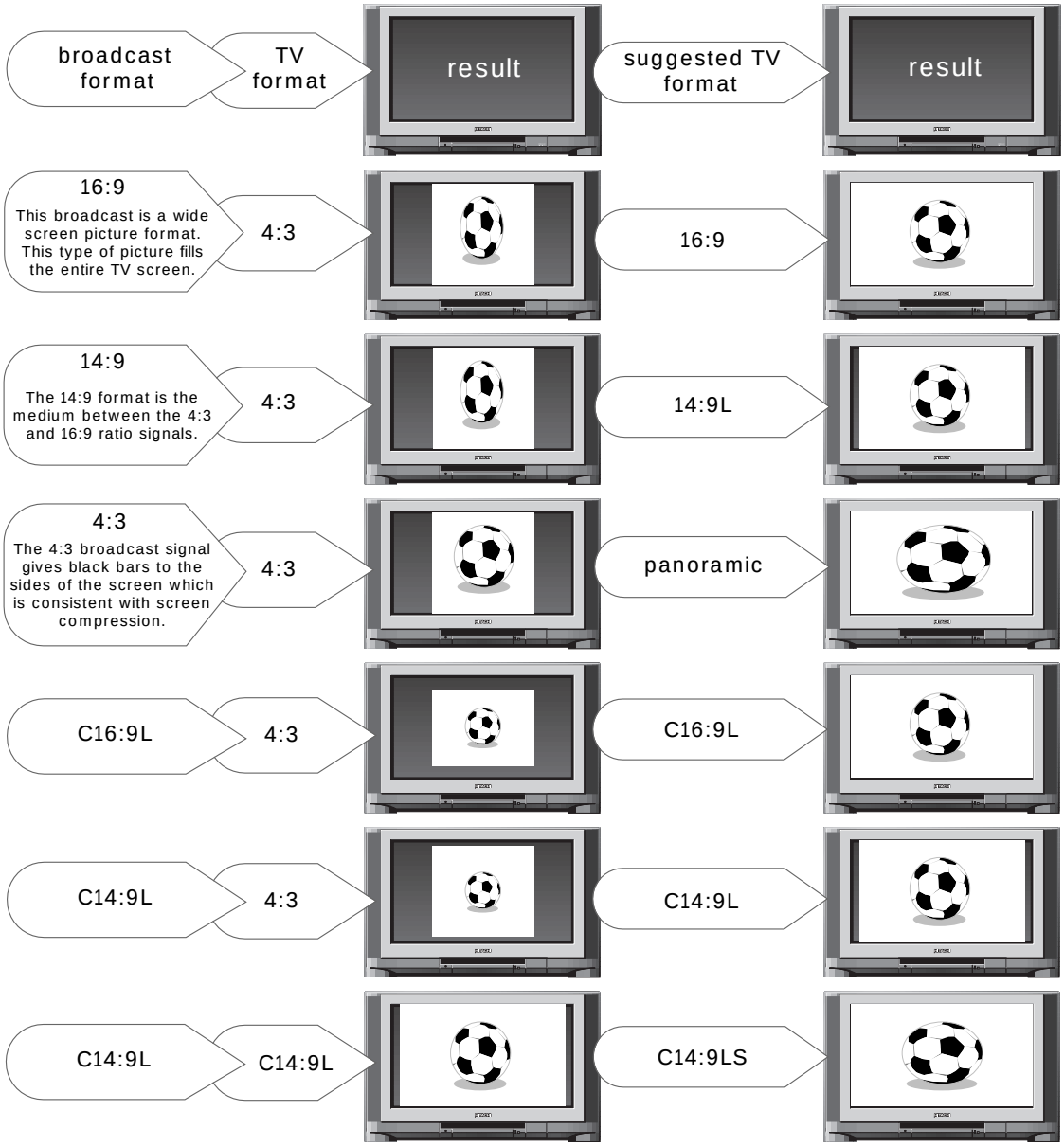
5. Use right/left buttons to adjust chosen feature.



6. Once highlighted, accept selection - when you turn your TV off, and the TV will memorise your adjustments

...notes on wide screen features

Various broadcast stations now transmit movies and programs in true wide screen format. Your TV detects these signals and automatically switches your TV to the correct viewing format. However, some broadcasters do not transmit this automatic sensing signal, and so your TV will not recognise which format is being transmitted. Your viewing format can be selected manually by simply pressing the 16:9 key on your handset to scroll through the viewing format options
See the examples below for the available viewing formats.



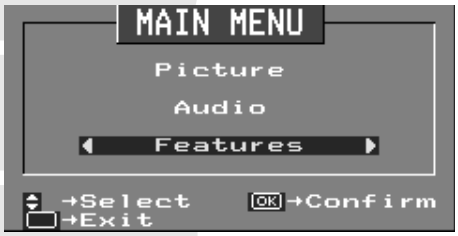
...notes on auto mode

The Auto format is also one which can be selected manually. Auto mode automatically detects various screen formats that are transmitted in either conventional (4:3) or wide screen (16:9 or 14:9) format. After detecting which signal is being transmitted the TV will automatically switch to the correct screen ratio.

...notes on Default features

Your TV also has default features which can control the viewing format of your TV's picture. See below for entry into and adjustment of these features.

1. Press the MENU button to obtain MAIN MENU.



2. Press the cursor down button to select FEATURES.

3. Once highlighted, accept selection.

4. Use up/down cursor buttons to select option to adjust.

5. Use right/left buttons to adjust chosen feature.

6. Once highlighted, accept selection - when you turn your TV off, and the TV will memorise your adjustments

...notes on Default Zoom Default 4:3

Various broadcast stations now transmit WSS (Wide Screen Signals) which identifies the picture format movies and programs are broadcast in.
Your TV can detect these Wide Screen Signals and automatically switches your TV to the correct format. However, some broadcasters do not transmit this WSS, and so your TV will not recognise which format is being transmitted. Therefore, DEFAULT ZOOM is used to choose your picture requirements when a Wide Screen Signal has not been sent or has not been detected
The DEFAULT 4:3 acts in the same manner, but only looks for a 4:3 WSS. If this is detected your TV's picture format will be in accordance with the setting in the DEFAULT 4:3 option.

...notes on Default 4:3

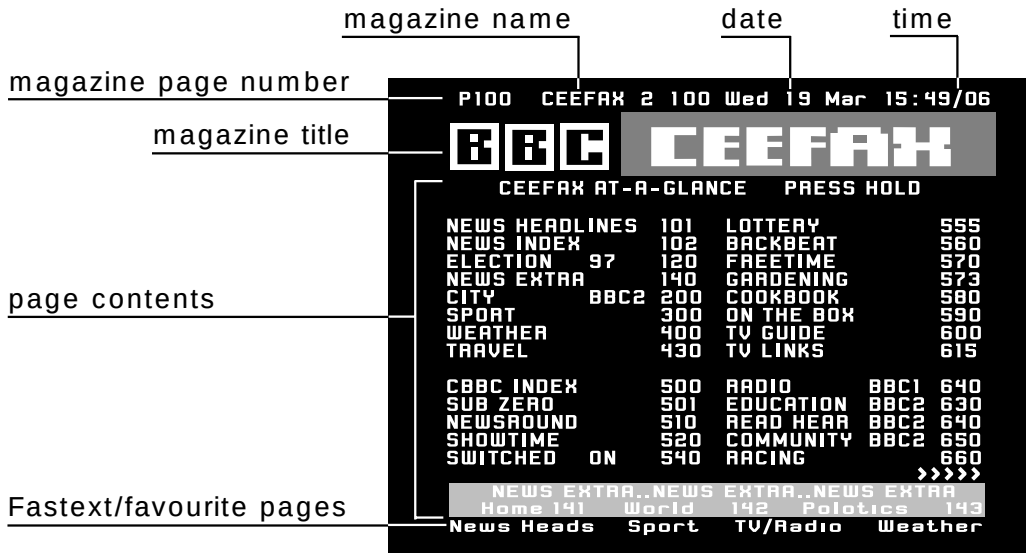
If your TV is receiving a 4:3 Wide Screen Signal, the viewing format displayed can be set using the 4:3 default.

...notes Auto WS Detect

Auto Wide Screen Detect, when switched ON (and there is no WSS signal) enables your TV to look for the black bands at the top and bottom of the picture received and displays your picture in the format it is received in.If this is set to 'OFF', these black bands cannot be detected. Therefore the picture format will revert to the setting specified in the DEFAULT ZOOM option if there is no WSS signal.

...notes on Teletext

Teletext is an on screen information magazine and it is entered by pressing the teletext button on your handset - a page similar to the one below will appear.
Select the topic you want to view by entering a three digit number on your handset corresponding to the page number eg. press 1,0,1 for the News Headlines.
Alternately, press a coloured button which relates to one of the topics at the bottom of the screen(the Fastext service) eg. press the green button on your handset for the sport magazine.


magazine name
date
time
magazine page number
magazine title
page contents
Fastext/favourite pages
P100 CEEFAX 2 100 Wed 19 Mar 15:49/06
BBC CEEFAX
CEEFAX AT-A-GLANCE PRESS HOLD
NEWS HEADLINES 101 LOTTERY 555
NEWS INDEX 102 BACKBEAT 560
ELECTION 97 120 FREETIME 570
NEWS EXTRA 140 GARDENING 573
CITY BBC2 200 COOKBOOK 580
SPORT 300 ON THE BOX 590
WEATHER 400 TV GUIDE 600
TRAVEL 430 TV LINKS 615
CBBC INDEX 500 RADIO BBC1 640
SUB ZERO 501 EDUCATION BBC2 630
NEWSROUND 510 READ HEAR BBC2 640
SHOWTIME 520 COMMUNITY BBC2 650
SWITCHED ON 540 RACING 660
NEWS EXTRA..NEWS EXTRA..NEWS EXTRA
Home 141 World 142 Politics 143
News Heads Sport TV/Radio Weather

...notes on favourite pages

Your TV is capable of storing up to four of your favourite Teletext pages - maybe the sports page, cookery page or gardening page - the choice is yours. These are accessed, like Fastext, by pressing the colour coded buttons on your handset. Follow the steps below to enter your favourite pages.

1. Enter Telextext by pressing the Teletext button.
2. Enter favourite page mode by pressing the menu button (this allows you to swap between Fastext and favourite page mode).
3. Press a colour coded key you wish to use as a favourite page.
4. Enter the 3-digit page number using the buttons.
5. Once this number has been entered, press and hold the same colour coded button until the favourite page box turns white, then returns to its original colour.
6. Repeat if necessary using a different coloured key, or press the menu button to return to normal viewing.

P100 CEEFAX 2 100 Wed 19 Mar 15:49/06
BBC CEEFAX
CEEFAX AT-A-GLANCE PRESS HOLD
NEWS HEADLINES 101 LOTTERY 555
NEWS INDEX 102 BACKBEAT 560
ELECTION 97 120 FREETIME 570
NEWS EXTRA 140 GARDENING 573
CITY BBC2 200 COOKBOOK 580
SPORT 300 ON THE BOX 590
WEATHER 400 TV GUIDE 600
TRAVEL 430 TV LINKS 615
CBBC INDEX 500 RADIO BBC1 640
SUB ZERO 501 EDUCATION BBC2 630
NEWSROUND 510 READ HEAR BBC2 640
SHOWTIME 520 COMMUNITY BBC2 650
SWITCHED ON 540 RACING 660
L XXX XXX XXX XXX

favourite page box

...notes on teletext dual page feature

At Hitachi we are committed to the constant development of our televisions capabilities. One of the features developed for the benefit of you, the customer, is the expansion of the Teletext service from a one page screen display to a feature that can be manipulated in a number of ways.
The instructions below show how to take advantage of this excellent feature whatever your viewing environment or demands.

option 1

standard teletext

Standard teletext can be entered by pressing the teletext button on your handset - *see page 13 for details* - and this screen must be entered before any of the dual page options can be used.

option 2

dual teletext page operation

This option splits the viewable screen area in half so that two teletext pages can be viewed together - although only one page can be changed at a time. This is achieved by pressing the 16:9 button on your handset once. Pressing the OK button on your handset places the right hand screen on the left side and 'freezes' the page. When a new page number is entered, the right hand side will change while the left will remain the same.
Pressing the (X) button on your handset will erase the left hand page.

P100 CEEFAX 2 100 Wed 19 Mar 15:49/06
BBC CEEFAX
CEEFAX AT-A-GLANCE PRESS HOLD
P300 CEEFAX 2 100 Wed 19 Mar 15:49/06
SPORT
CEEFAX AT-A-GLANCE PRESS HOLD
WIN CUP FINAL TICKETS TO WEMBLEY
News Heads Sport TV/Radio Weather

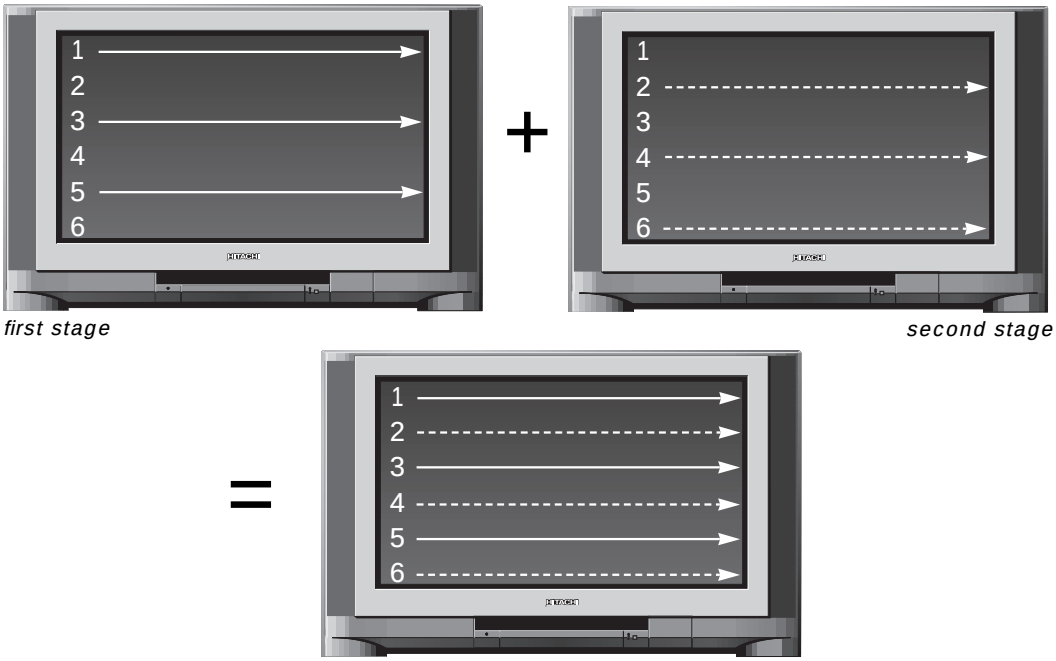
option 3

teletext page and TV viewing

An advance on the previous 'mixing' facility where a transparent page overlaps the program on view, this option splits the screen in half. Press the 16:9 button twice on your handset (from option 1) to use this feature. This option has the same function as the standard teletext page *(see option 1)* but with the capacity to also view the program being watched before Teletext was entered.

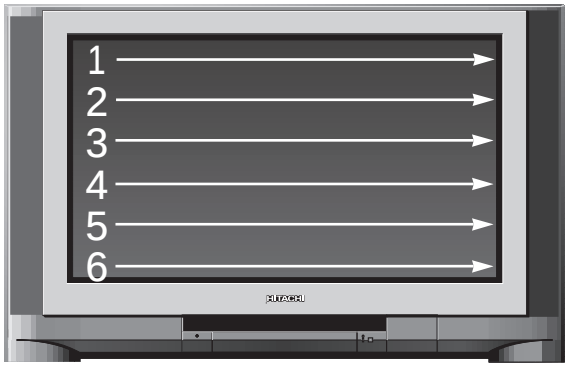
To return to normal TV operation press the television button on your handset.

standard 50Hz picture



In a standard 50Hz television the picture is created in two separate stages. For example, scan lines 1, 3, and 5 etc. are filled in first. Once this stage is complete scan lines 2, 4, and 6 etc. are filled. This means that after these two stages all the lines on your television screen have been filled (625 in total) resulting in a complete frame. This process is then repeated creating the picture you see on the screen of a conventional TV.
Note: a standard 50Hz picture is not available on your model

Progressive Scan



Hitachi's Progressive Scan TV's are constantly thinking ahead, filling in all the 625 scan lines in one go to make up a complete frame. This progressive addition of extra line information produces a picture that is brighter, more detailed than conventional televisions and displays the picture without the line 'flicker' often associated with 50Hz sets.

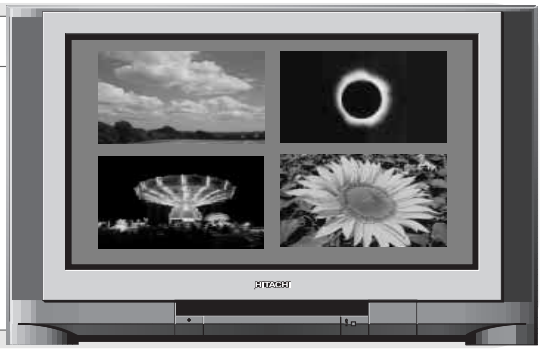
100Hz Natural Scan

Our 100Hz TV's create double the number of images per second, compared to a conventional 50Hz set. This delivers sharper, clearer, more stable total pictures which are flicker free. Our 100Hz sets also feature "Natural Scan" technology. This process eliminates the slight trembling of lines on the picture that is visible on conventional TV sets giving a rock steady picture which is clear and detailed. To switch between Progressive Scan and 100Hz press the button on your handset.

...notes on multiple picture

By pressing the multiple picture button on the handset ( ) your TV screen will step through and display all channels received through your aerial (depending on the display mode - see below).

Example on right shows a Display Mode of x4



1 Press the MENU button to obtain MAIN MENU.

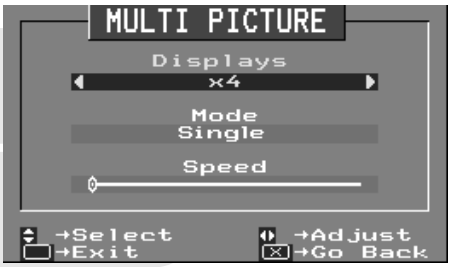
2 Press the cursor down button to select FEATURES.

3 Once highlighted, accept selection. OK

4 Use up/down cursor buttons to select MULTI PICTURE feature.

5 Press the OK button on your handset to accept selection. OK

6 Use the up and down buttons to select an option, use the left and right keys to adjust values.



Note: If the Display Mode is set to x16 *and you can only receive 10 channels, 6 of these will be repeated.*

displays

This determines the amount of channels which can be viewed at one time - either 4, 12, or 16.

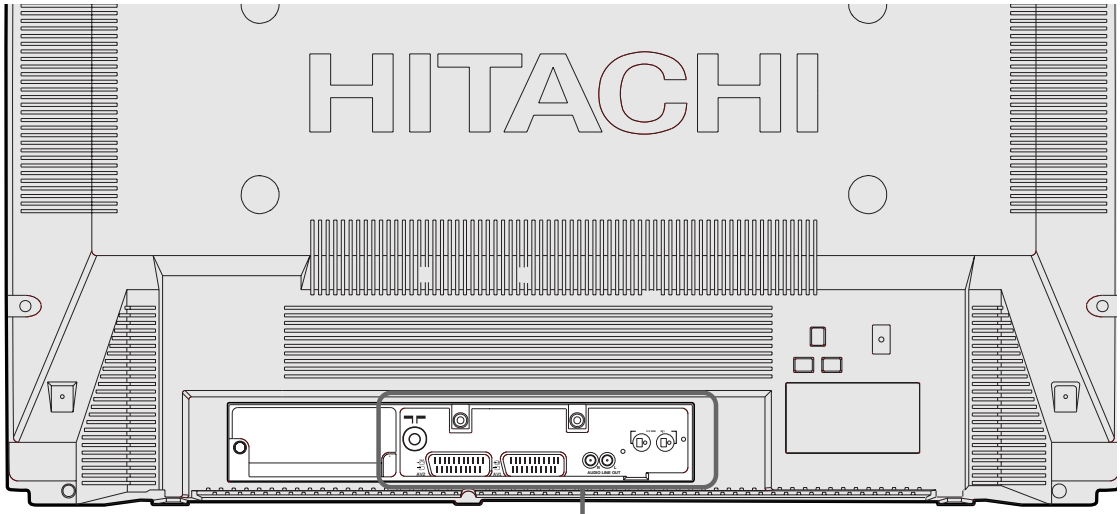
mode

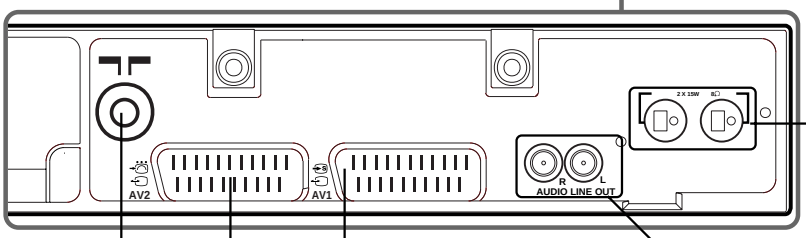
Use this to show multi-pictures of different channels (option 'Multi'), or multiple pictures of the same channel (option 'Single').

speed

This is used to decide the time delay between the pictures appearing on your TV screen when in Multi Picture mode - the pointer to the left means a short delay, pointer to the right means a longer delay.

7 To return to normal TV operation press the television button on your handset.





Before connecting external equipment, please consult **Audio Visual Setup** on page 33.

DIN sockets

The DIN sockets are used to connect two external speakers for which no amplifier is necessary. R is for the right external speaker, and L is for the left external speaker.

AV1 scart input

·Use this socket to connect ordinary VHS, S-VHS or Hi8 equipment to your TV.

AV2 scart input

Use this to connect digital video broadcasting equipment, home computers and home entertainment systems to your TV

audio line out sockets

Use these connections to attach your leads to the amplifiers and speakers:

R is for the right amplifier and speaker
L is for the left amplifier and speaker

RF aerial socket

This should be permanently connected to an RF source - i.e your aerial antenna.

camcorder

Connecting a camcorder to your TV is easy. First, identify the type of camcorder and its connecting sockets. If it is a standard 8mm type camera then this is likely to have 'RCA' type sockets. If you have a S-VHS or Hi8 camera you may have a S-VHS socket. Open the front control panel door and connect your equipment as detailed here. Switch your TV on and press the TV/AV button on your handset until AV3 is displayed on your TV screen. Now begin playback operation of your equipment. Alternatively, you could allocate an individual channel number for your camcorder equipment - see **Signal Source Entry** on page 30.

Before connecting external equipment, please consult **Audio Visual Setup** on page 33.

audio in right

Use this socket, along with audio in left to obtain sound from your external equipment through your TV's speakers.

headphone connection

To use headphones with your TV insert the headphone jack plug (3.5mm) into the corresponding socket.

audio in left

Use this socket, along with audio in right to obtain sound from your external equipment through your TV's speakers.

S-VHS socket

Use this socket with an S-VHS or Hi8 camera to view your recordings.

video in

Use this in conjunction with a standard 8mm camera to see the picture from your equipment.

connecting to the mains socket

Important - Please read **Television Safety** on page 4 before connecting your television and external equipment.

If digital video broadcasting equipment, computer equipment or video games are to be connected to this TV, use the AV2 located on the rear of your TV for RGB input.
PLEASE NOTE: Prolonged use of computer equipment or games on this TV may cause permanent damage to your picture tube. To avoid such damage, reduce the brightness and contrast to an acceptable level and limit the duration of use of computer equipment.

...notes on signal source entry

Each piece of external equipment connected to your TV must have its own input socket. It would also be easier, and more organised, if the external equipment connected also had its own channel number. *Signal Source entry allows us to tell the allocated channel what equipment is connected to which socket.* This would make the switching between normal operation and the connected equipment much smoother.

For example, if you want to connect a games machine to your TV -

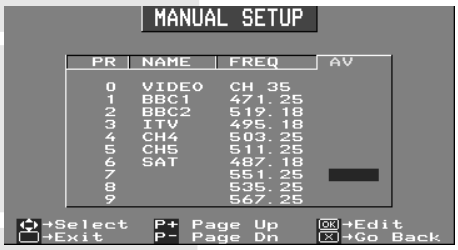
1. connect to socket AV2 via a scart lead (see page 28).
2. give your games machine an empty channel number of its own.
3. if desired change this channel name (see page 16).
4. give this channel the correct AV signal source (in this case AV2 - option 2, page 31).

1. Press and hold the MENU button for 5 seconds. The INSTALL option in the MAIN MENU appears.

2. Press the cursor down button to select INSTALL.
3. Once highlighted, accept selection.

4. Press the cursor down button to select MANUAL SETUP.

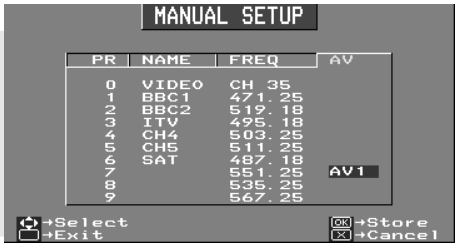
5. Once highlighted, accept selection.
6. Use the cursor keys to move the selection bar over the AV required to be adjusted.



7. Once highlighted, accept the selection to change your TV's Audio Visual setting and you will see the selection bar turn red - it is ready to be changed.
8. Select your method of signal source entry using the up/down cursor buttons.

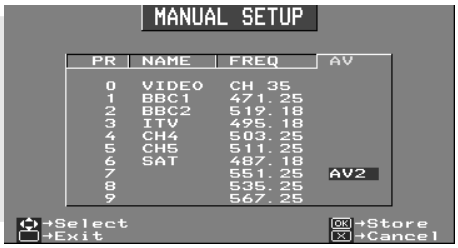
option 1

AV1 is the signal source used when connecting external equipment (eg. VCR) through a scart lead to the AV1 socket at the rear of your TV.



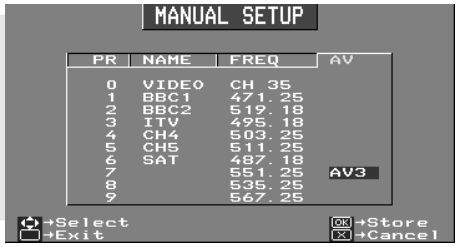
option 2

AV2 is the signal source used when connecting external equipment such as home entertainment systems and satellite decoders through a scart lead to the AV2 socket at the rear of your TV.



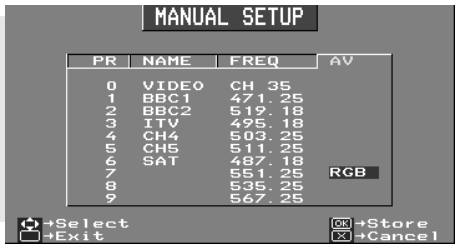
option 3

AV3 is the signal source used when connecting temporary equipment like a camcorder to your TV through the audio/video sockets at the front of your TV.



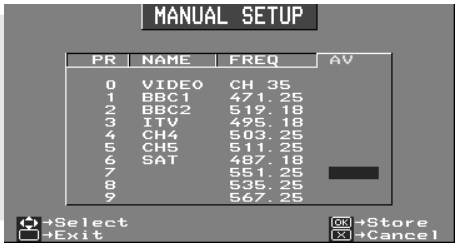
option 4

RGB is the signal source used when connecting digital video broadcasting equipment or home entertainment systems to your TV through the AV2 scart lead at the rear of your TV.



...notes on RF signal source

RF is the signal source used for standard television broadcasting and this should be used as the setting for programs BBC1, BBC2, ITV, CH4/S4C, and CH5 (where available). This source appears blank.



9 Once the signal source for each relevant program number has been decided, this can be stored in your TV's memory by pressing the conformation button.

OK

10 To return to normal TV operation press the television button on your handset.

on/off button

Use this to switch your TV on and off.(when switched off using this button your TV consumes no power - unlike when in standby mode).

TV mode light

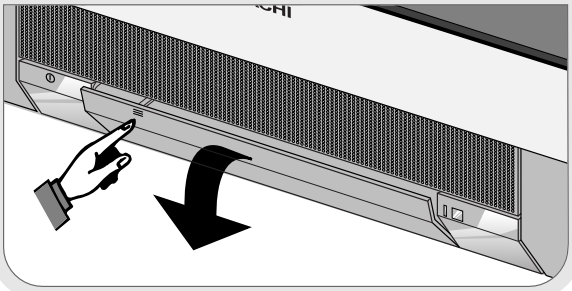
This will be lit when your TV is on and when in standby mode, and flash when a function from your remote control is being sent to the TV.

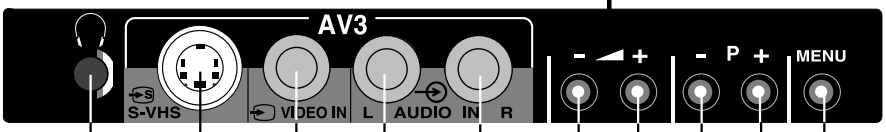
infra-red lens

This is for reading commands sent from your remote control handset.

television controls door panel

To use the controls push the door in and release.





headphone socket

Used with headphones (3.5mm stereo jack plug required).

volume buttons

Used to increase '+', or decrease '-' your TV's sound (or cursor right and left when in On Screen Display menus).

S-VHS sockets

This socket is for use with external equipment - *see page 29.*

program buttons

Used to change the TV channel up '+' or down '-' (or cursor up and down when using the On Screen Display menus).

audio/video sockets

These sockets are for use with external equipment - *see page 29.*

menu button

Used to access your on screen MAIN MENU for TV features adjustment.

important note

It is very important that the AV menu setup is adjusted correctly when connecting external equipment to your TV - the incorrect setting may lead to picture breaking and splitting.

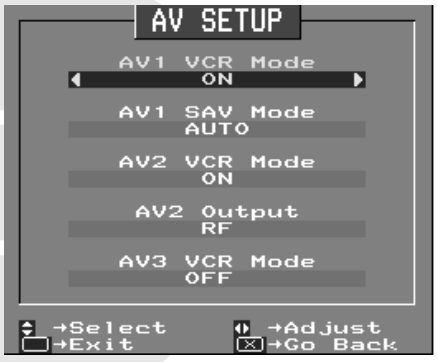
...notes on using VCR's and camcorders through AV input

The AV Input screen is used as a means of instructing your television to recognise what external equipment is being connected to your TV's scart, S-VHS and/or phono sockets. If you have any equipment connected to your TV (either permanently, like a VCR, or temporary, like a camcorder) it is important your TV recognises which kind of equipment is connected and so you must switch the relevant AV to ON for all VCR's and camcorders (in the case of having S-VHS or Hi8 equipment, AV1 SAV MODE must be set to the appropriate setting - it is recommended that this setting is AUTO). For example, your VCR should be connected to AV1, therefore AV1 mode should be set to ON.

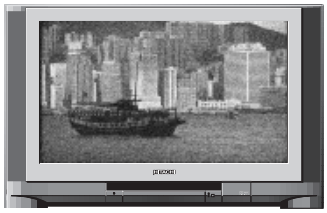
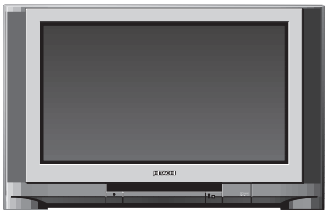
1. Press and hold the MENU button for 5 seconds. The INSTALL option in the MAIN MENU appears.
2. Press the cursor down button to select INSTALL.
3. Once highlighted, accept selection.

4. Press the cursor down button to select AV SETUP.
5. Once highlighted, accept selection.

6. Use the up/down cursor keys to select AV to adjust.
7. Adjust chosen AV by using the left/right cursor buttons.
8. Once highlighted, accept selection.



questions	answers
Why won't my TV switch on?	Check that your plug is connected to the socket and switched on,check fuse and make sure TV is not in standby mode (see below)
Why doesn't my remote control handset work?	Make sure there are no obstructions between the handset and the TV's infra-red lens, or the batteries may be exhausted - replace the whole set of batteries.

problem identification	possible reason	remedy
 snowy picture - poor sound	Connection of aerial lead to the TV is poor.	Make new connection and/or change aerial plug.
	Corroded or poor aerial connections.	Make new connections or renew lead.
	Aerial has moved position.	Re-align aerial.
	Adverse weather conditions.	None.
	Transmitter problems.	Check with local Operator.
multiple images - sound O.K	Aerial has moved position.	Re-align aerial.
	TV not tuned correctly.	Re-tune or fine tune TV.
	Adverse weather conditions.	None.
	Transmitter problems.	Check with local Operator.
	AV Input not set correctly.	Check what external equipment is connected and check its scart AV status (see page 33).
intermittent interference	Magnetic interference from electrical or mechanical motors, fluorescent lights, portable radios etc.	Check devices for shielding and renew if necessary or move further from TV.
 no picture or sound	TV may be in AV mode.	Press television button or 0 to 9 buttons on your handset to return to normal TV mode.
	Picture/sound controls set to minimum.	Check picture/sound controls (go to MAIN MENU).
	TV in standby mode.	press one of the buttons 0 to 9.

If a problem still continues after referring to this guide contact your dealer immediately.

Under NO circumstances remove the rear cover of your TV.

Guarantee

Thank You for purchasing this Hitachi Television.

In the unlikely event that this product should develop a fault, we undertake to repair or replace any part of the product which fails due to a manufacturing defect within 12 months of the date of purchase provided that...

1. the product has been installed and used only in accordance with the instructions supplied with the product.
2. the product has not been repaired, maintained, or modified by any person other than a Hitachi authorised dealer.
3. the product serial number has not been removed or altered.

•this guarantee does not apply to a product acquired second hand or for commercial or communal use.
•this guarantee does not cover the replacement of exhausted batteries, the adjustment of user controls, or aerial alignment.
•any parts replaced under this guarantee shall become the property of Hitachi Home Electronics (Europe) Ltd,
•please note that evidence of the date of purchase will be required before any service under this guarantee is carried out

Use the boxes provided below to record your TV's Model and Serial Number - these are found on the rating plate located on the rear of the TV. Also, record where and when you purchased this T.V. This information will help any future queries you may have and should be used in all correspondence with Hitachi service centres.

MODEL	SERIAL NUMBER	DEALER/STORE	DATE PURCHASED

This guarantee does not affect your statuary rights.

In all cases of difficulty please consult your Hitachi dealer.

HITACHI

Environmental Notice

Hitachi are signatories to the commitment made by the consumer electronics industry on reducing energy consumption by televisions and video recorders on standby.

Even though your TV has a low power consumption, you can reduce waste to zero if you switch off the set at the mains after use. Your TV should certainly be switched off overnight or when you are away from home. Other factors should also be considered when operating your TV. Reducing volume settings to sensible levels can reduce power consumption as well as reducing noise pollution, and reducing contrast can provide a more pleasing picture as well as reducing power consumption.

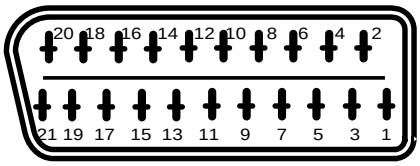
Hitachi Home Electronics (Europe) Ltd. manufacturing site in Wales is a BSI Registered Company, and has been assessed to ISO 9001 Quality Management Standard, certificate FM32366. Your television has been manufactured under the Environmental Quality Management Standard ISO14001, certificate EMS 36168.

The paper used for this Users Guide has been produced from sustainable forests, part of Hitachi's on going commitment to the global environment.

television specification

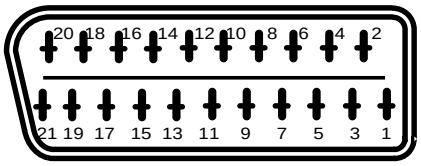
TV Standard	100Hz
Progressive Scan	50Hz
Aerial Impedance	75Ω unbalanced
Picture Tube	66cm type
	76cm type
Mains Voltage	220 - 240V AC 50 Hz
Internal Speakers	8Ω 15Watt
Power Consumption	66cm models = 120W (approx)
	76cm models = 126W (approx)
	Standby <6W (all models)
Weight	66cm = 33.50kg (NET)
	76cm = 55kg (NET)
Dimensions (Width x Depth x Height)	66cm = 790 x 525 x 516 (mm)
	76cm = 883 x 572 x 551 (mm)
Remote Control Batteries	2 X HITACHI R6P(G)
	(equivalent 'AA')

scart socket AV1



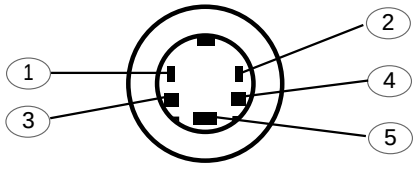
1	AUDIO OUT (RIGHT)
2	AUDIO INPUT (RIGHT)
3	AUDIO OUT (LEFT)
4	GROUND (AUDIO)
5	NOT USED
6	AUDIO INPUT (LEFT)
7	NOT USED
8	SWITCHING INPUT
9	NOT USED
10	NOT USED
11	NOT USED
12	NOT USED
13	CHROMINANCE GROUND
14	NOT USED
15	CHROMINANCE INPUT S–VHS
16	NOT USED
17	GROUND (VIDEO)
18	GROUND (VIDEO)
19	COMPOSITE VIDEO OUTPUT
20	COMPOSITE VIDEO OR COMPOSITE LUMINANCE S–VHS
21	GROUND

scart socket AV2



1	AUDIO OUT (RIGHT)
2	AUDIO INPUT (RIGHT)
3	AUDIO OUT (LEFT)
4	GROUND (AUDIO)
5	GROUND (BLUE)
6	AUDIO INPUT (LEFT)
7	BLUE INPUT
8	SWITCHING INPUT
9	GROUND (GREEN)
10	NOT USED
11	GREEN INPUT
12	NOT USED
13	GROUND (RED)
14	GROUND (BLANKING)
15	RED INPUT
16	STATUS (BLANKING) INPUT
17	GROUND (VIDEO)
18	GROUND (VIDEO)
19	COMPOSITE VIDEO OUTPUT
20	COMPOSITE VIDEO INPUT
21	GROUND

S-VHS socket



PIN	FUNCTION
1	Chrominance input
2	Luminance input
3	Chrominance ground
4	Luminance ground
5	Frame ground

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